

# **A GUIDE TO THE SYSTEM MAINTENANCE STUDY PROCESS**



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**TOTAL COMPENSATION/SYSTEMS TEAM  
DEPARTMENT OF PERSONNEL & ADMINISTRATION  
DIVISION OF HUMAN RESOURCES**

**Revised July 2003**

A system maintenance study is a structured review of part or all of the state's job evaluation system. Such studies are conducted for many different reasons. A system maintenance study may be conducted to determine whether the class structure is current and adequate, whether established salary grades and relationships are appropriate, and whether specific classes should be revised, abolished, or created. System maintenance studies ensure job classes are grouped and paid consistently. Studies may involve pay grades, a single class series or several class series, but they can also be focused on a single class. System maintenance studies may also involve an entire occupational group or the entire job evaluation system.

All recommendations to create, amend or abolish a class are published as "proposed" to provide an opportunity for discussion and comment. No individual position may be assigned ("allocated") to a proposed class until the class is approved as final. All proposed and final changes are provided to agency human resource administrators (as agents of the employer), who are responsible for distributing the information within their respective agencies assuring that appointing authorities have information so they can notify directly affected employees. Employees are notified of final changes so that appointing authorities can explain or resolve issues. All proposed and final changes are published on the Department's website at [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr).

System maintenance studies take effect on a date approved by the state personnel director. The effective date must meet statutory and procedural requirements, including consideration of fiscal impact issues. Studies with fiscal impact (up or down) are reported in the annual compensation report.

Colorado uses broad-based class series. Some of the advantages of broad classes include ease of cross training, greater mobility within the system, and flexibility of assignments and staff deployment. The class descriptions identify the nature and character of occupational areas and identify general characteristics of positions as they relate to particular levels in a class series. Class descriptions are not individual job descriptions. Consequently, all positions that belong in a class are not precisely identified. Because a class often uses a general title and covers a wide range of individual jobs, the use of working titles is encouraged.

Reference is made in this document to "meet and confer." This is a formal process required in statute for both salary surveys and system maintenance studies. "Meet and confer" means to provide an opportunity for an open exchange of information and viewpoints, which are considered before a survey is conducted or a study implemented. It occurs at different times depending on whether the activity is a survey or a study. For surveys, it must occur before a survey is conducted. For studies, it must occur before the final results of a study are implemented. The formal "meet and confer" process does not preclude other communications activities that typically occur during studies. The Department typically initiates the "meet and confer" activity in order to keep the process manageable. "Meet and confer" can take a number of forms, including public meetings, electronic communication (e.g., teleconference or fax), telephone conversations, written communication (including e-mail), or any other means of communication. Detailed information on the "meet and

confer” process for salary and benefit surveys is contained in a separate document available at [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr).

## **Indicators a System Maintenance Study is Needed**

Some “triggers” for conducting a system maintenance study are listed below.

- ✓ A trend that pay is out of alignment, including the following:
  - the amount is at least +/-7.5 percent from the prevailing labor market;
  - the difference from one year to the next is stable or growing;
  - the difference continues for several survey cycles;
  - the composition of the labor market sample when the class is a survey class;
  - historical internal pay relationships that exist between the class(es) and other related classes; and,
  - significant trends or differences in market pay practices.
- ✓ Market conditions such as documented difficulty recruiting and/or retaining employees.
- ✓ The concept of classes is not clearly distinguishable from other classes:
  - classes could be consolidated;
  - factors differentiating levels are inappropriate or frequent use of factor tradeoffs is reported throughout the system; and,
  - changing occupations create a need for a new class or series.

## **Special Types of Studies:**

Two types of studies are conducted routinely or systematically.

Elimination of vacant classes: This study is done annually to eliminate classes that are no longer used. Information is taken from EMPL (the personnel system database) and a list of vacant classes is generated. The list is sent to all agency human resource administrators, who are asked to comment on whether the classes are needed. Comments are considered and the list is revised and proposed for abolishment.

Consolidation: Consolidation studies are done by occupational group in an effort to streamline and consolidate duplicative and overlapping classes. The focus is on developing fewer, broader classes.

## **Study Process**

The following generally outlines the typical elements and considerations of a system maintenance study. Depending on the scope and nature of a study, steps may be added or removed at the discretion of the occupational specialist leading the study.

## Identify, Explore and Document Issues

Information is gathered by conducting literature review and research, including occupational literature, class/series history, salary survey information, employee and manager communication (phone, written, or meetings), any past appeal records, and market data. Issues may be discussed with managers, human resource professionals, or other interested parties to clarify.

Part of the research is to answer the following questions:

- ✓ What is the organizational distribution of the class or series?
- ✓ Are all agencies using the classes having similar problems or issues?
- ✓ What is the history of the class or series? How long has it been since it was last studied?
- ✓ Are all classes (levels) in the series being used? If not, why?
- ✓ Are there salary survey matches for the classes? What does the survey data show and for how long?
- ✓ What is the pay relationship between the classes and other classes in the series? Do similar problems or issues exist in similar or related classes?
- ✓ Is a system maintenance study likely to solve the issues or problems? What are other options for addressing the issues if a study is not appropriate or necessary?

Information is documented, typically for a narrative report, and includes contacts, issues identified, and actions taken to address the issues. Documentation is important because it provides a history of the problems/issues with classes and the occupational specialist's ideas and efforts in addressing those issues, especially in those situations where a study is not conducted.

## Scheduling Studies

Studies are typically scheduled on an annual, fiscal-year basis. Studies are timed to allow pay grade changes to be included in the annual compensation report. Due to statutory requirements, studies involving changes to structure and grade have a July 1 implementation date. Studies are identified and prioritized based on a variety of issues, including the criticality of the problems experienced with current classes, number of classes involved, number of agencies affected, and staff resources available.

Once the study schedule is established for the upcoming year, it is normally published in several ways: email to all agency human resource administrators and general employee organizations, articles in the *Advisor* (a newsletter for state human resources professionals), press releases to other agency newsletters, and on the division's website at [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr). The announcement of studies usually includes the scope and purpose of each study and a tentative schedule for its completion.

## Study Initiation

Depending on the scope and purpose, the study may be conducted by one or more occupational specialists who may lead a study team. If a team approach is used, the study announcement includes details about the qualities sought in team members and invites interested persons to apply. When study teams are used, they often include a broad sample of human resource professionals from various disciplines including job evaluation, selection, compensation, and possibly, staff members from the EMPL database system. If appropriate, representatives from both higher education and non-higher education agencies are sought. Managers and employees in the occupation being studied may be invited to present information during the course of the study.

Occupational specialists select team members. The team leader (occupational specialist) then discusses the following with the study team:

- ✓ team member roles and needs;
- ✓ purpose and goals of the study;
- ✓ the process (including any job description collection or rating processes);
- ✓ major issues;
- ✓ major tasks and timelines;
- ✓ compatibility with the annual compensation report cycle and deadlines;
- ✓ confidentiality;
- ✓ the parameters for the inclusion and role of agency representatives and subject matter experts;
- ✓ the development of on-going communication and information distribution lists and mechanisms;
- ✓ the need for any special compensation surveys; and,
- ✓ implementation plans.

The occupational specialist, in consultation with the study team, determines if reviewing and rating job descriptions will be part of the study, and if so, whether job descriptions for all jobs in the series will need to be rated or if rating a sample will be sufficient. If only a sample is to be evaluated, the position/organizational distribution of the classes or series is analyzed to assure the sample is representative. Agencies are then contacted and official job descriptions, organization charts, and other data are requested for the study. The request should include clear expectations of the standards for quality control, the scope of the study, the purpose of the study team, how the panel process will be used, the role of agency representatives in any panel and rating processes, whether class placement will occur, and the timeframe for submitting requested information.

Depending on the nature of the study, collecting and rating job descriptions is not always necessary. For example, job descriptions are not needed when the issues for study are focused on pay and pay relationships and there are no issues with class concepts, levels, factors, or use of the series. On the other hand, if the issue is a request for an additional level within a series, collecting and rating job descriptions would be necessary to determine if the need for an additional level exists and, if so, what factor levels describe it.

If job descriptions are part of a study, the specialist establishes the rating panel and schedule and conducts the panel meetings. If additional information is required, site visits or interviews with subject matter experts may be conducted to collect additional information.

### **Analysis/Considerations**

Once all of the data have been collected, the analysis begins. The following lists some of the points that are addressed.

- ✓ Confirm appropriateness of the occupational group.
- ✓ Analyze the relationship of the class or series with other series considering potential overlap, possibility of consolidation, need for expansion, etc.
- ✓ Determine the need to expand, narrow, change, or redefine concepts.
- ✓ Review the number of levels.
- ✓ Identify and define entry, full-operating, supervisory, and other benchmark levels; examine factor thresholds based on the latest ratings of job descriptions or on similar levels or classes in the same group.
- ✓ Consider appropriateness and implications of an intern level.
- ✓ Review and establish number of levels.
- ✓ Review entry into the series and top-end exit from the series.
- ✓ Review span of control issues, e.g., level of subordinates needed for work leaders and supervisors.
- ✓ Assess need for and implications of specialty areas.
- ✓ Analyze compensation data, including verification of total compensation survey matches and use of pay differentials.
- ✓ Evaluate the need for conducting a direct compensation survey.
- ✓ Consider the pay grade and pay relationship of each class and the current level of compensation in the market.

### **Salary and Pay Grades**

Data from the total compensation survey is frequently used to set pay grades. If the class is matched directly to the market in the total compensation survey, then that salary data is applied. If the data shows the pay requires adjustment, then the survey match is verified along with data from previous years to establish a trend. If data through the total compensation survey is unavailable or not sufficient e.g., class is unmatched, minimal number of firms reporting, the salary variance fluctuates over several years; a direct survey may be conducted. If a direct survey is conducted, a survey form and capsule descriptions are developed and an appropriate sample of employers is selected. When a direct survey is conducted, “meet and confer” discussions occur beforehand to provide an opportunity for input from employees, managers, the general employee organizations, and the Total Compensation Advisory Council (TCAC). In some cases, internal relationships are used to set salaries for classes with insufficient data.

Survey sources that are part of the annual compensation survey remain confidential regardless of the specific method used to set salaries and are not available for viewing or copying. Survey sources outside the annual compensation survey process may also be used, e.g., published survey or direct survey. The following applies to the confidentiality of such data sources.

- ✓ If a data source is copyrighted, a party requesting this data will need to obtain copies directly from the source. Viewing aggregate information by appointment is possible but no copies or individual responses will be provided.
- ✓ If the source is another governmental body, the data is public information and it may be viewed by appointment or copies may be purchased. A published governmental survey may also be obtained directly from the source.
- ✓ If the source is an individual employer's response and confidentiality was promised as a condition of participation, the data will remain confidential. In the case of a public employer, data may be viewed by appointment or copies may be purchased; however, the identity of the individual participant will be removed.
- ✓ If the source is a private employer, not used in the annual salary survey, and confidentiality was not promised as a condition of participation, the data is available for viewing by appointment and copies may be purchased.

## **Communication**

Progress reports and working notes are regularly sent (e-mail and/or fax) during a study to personnel administrators. Periodic information generally appears in the *Advisor* and various agency newsletters, on the Department's website [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr), and through meetings with the human resources community and other interested parties.

The study work plan should establish an ongoing method to provide updates and give individuals opportunities to provide input as the study progresses. Managers, human resource professionals, supervisors, employees, and other subject matter experts should be involved throughout the study process. Communications time is built into the study work plan along with a process to regularly update stakeholders.

## **Published Documents**

Several documents are published at various times during a system maintenance study. These include the narrative report, class descriptions for each series, and a chart showing class conversion. For those studies involving class placement, there is also a chart showing each position and its individual class placement. Publishing a study involves several stages.

- ✓ The draft stage presents overall class structure and broad class concepts for the purpose of soliciting comments and input from interested parties before assigning proposed grades. Draft class descriptions may or may not be prepared depending on the specific study. A draft stage is not required.

- ✓ The proposed stage presents the recommended changes in an official Job Evaluation Letter (JEL). This stage includes a narrative report explaining the study process, any proposed class descriptions, any changes to pay grade, and any class placement or conversion charts. This stage includes the “meet and confer” process.
- ✓ The final stage, also presented in an official JEL, implements the changes on a specified effective date and includes the final narrative report and the official class descriptions.

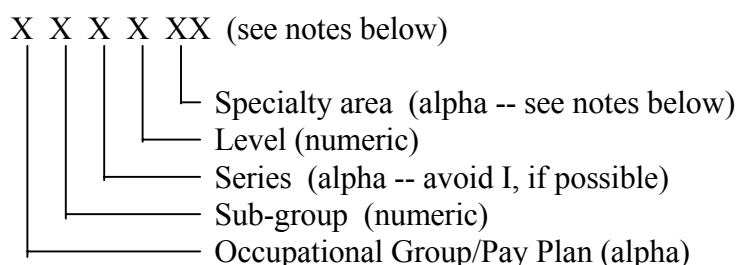
Class descriptions are written according to a standard format that includes the class title, class code, a general description of the occupational work of the series, a description of the concept of each class within the series, the appropriate levels for the job evaluation factors for each class in the series, any necessary definitions, a standard statement for minimum entrance requirements, the class series history, and a summary chart of factor ratings for all classes in the series. In some cases, examples of work may appear in the description of the concept or factors for a class. However, these are for illustrative purposes only and are not used as a basis of allocation of positions.

Narrative reports are written to provide a historical record of a study. They outline the study methodology, highlight essential changes, support the recommendations for the class or series and pay relationships and grades, outline the issues and rationale regarding why certain decisions were made, document “meet and confer” activity (in the final report), and document fiscal impact. A class placement chart, showing how positions will be moved from current to new classes, must also be included with the narrative when class placement occurs.

## Class Codes

Class codes are established using the “class coding” guidelines. Class codes are six characters long. Each separate class and level in a series must have a unique code, e.g., three levels need three titles and codes.

Characters within the codes mean the following:



A = Enforcement and Protective Services  
 B = Financial Services  
 C = Health Care Services  
 D = Labor, Trades, and Crafts  
 E = Medical

G = Administrative Services and Related  
 H = Professional Services  
 I = Physical Science and Engineering  
 J = Teachers  
 P = Temporary Aide

Notes. The fifth character of the class code defines the type of class and uses only the following:

\* for those with specialty areas that are not trainees or interns;



X for those without specialty areas and that are not trainees or interns;

I for those that are Trainee or Intern (used in class title);

T for target class -- first level in series above the intern or trainee. Typically, every series has a target class, whether there is an intern in the series or not, except for management, medical, supervisory, or other classes where interns or trainees do not normally move into them.

The sixth character defines the specialty areas and uses an alpha character for those classes with specialty areas and an X for those classes without specialty areas. The names of the specialty areas are found on the class description after the series title. They begin with A, go through Z, and DO NOT use X. For example, I3B3\*B is the code for the Physical Sciences Researcher/Scientist II, chemistry specialty area.

## **Proposed Publication**

Once the proposed publication package is prepared, the documents are routed *internally* within the Division of Human Resources, Department of Personnel and Administration to the team manager for approval to release externally. As part of ongoing communication, proposed changes are also shared with selection, payroll and employee database staff in the Department of Personnel and Administration.

The publication of a Job Evaluation Letter (JEL) is the official notification of proposed changes. Agency human resource administrators, in their capacity of acting on behalf of the agency appointing authority, receive a package of materials in the proposed JEL and are responsible for notifying and providing information to affected employees within their agencies. All other appointing authorities in an agency also are responsible for providing this information to affected employees. The general employee organizations receive the information the same time it is provided to the agencies. In addition, notice of proposed changes typically appear on the Division of Human Resources' website, with the exception of special use classes or minor proposed changes, e.g., title and code changes, adjustments to factors. Agencies should use any appropriate and reasonable means of communication available (print, e-mail, direct mailings, agency newsletters, personal letters to individual employees, etc.), particularly if the study will result in a potential change of pay grade(s).

In order to meet executive requirements and legislative mandates concerning fiscal impact of system maintenance studies, the effective date for studies is July 1. Most studies must be completed in early May to allow ample time for "meet and confer" sessions and final publication processes to be completed by June 1. Proposed changes that result in increased costs or potential savings are often delayed a year until the next July 1 so they can be reported in the annual compensation report.

## **Meet and Confer**

CRS 24-50-104(1)(b) requires the department to "meet and confer" in good faith with affected employees and employee organizations, when requested, before the proposed results of a study are finalized and implemented. Affected employees are those in the class for which changes are proposed.

Both official notice and “meet and confer” occur at the end of a study when results are proposed. For example, a large study with major changes may have several public meetings scheduled in different regions of the state for affected employees and employee organizations to attend.

All “meet and confer” activities need to be concluded within a reasonable time frame before release of the final results. The proposed JEL and any other notices that may be issued will include a date by which such activity must conclude. While the Department initiates the public meeting(s), an individual may request a meeting by the deadline published in the proposed JEL. For example, if implementation is scheduled for July 1, activity (scheduled public meetings and any individual requests for meetings) may need to be concluded by May 1 in order to finalize changes and prepare for implementation. The Department generally tries to allow 30 calendar days or more, beginning with the date the notice is published, for “meet and confer” activity on major studies.

Once the deadline for comment on draft and proposed documents has passed, the comments and objections expressed are addressed and decided. To the extent possible, answers to issues raised during the comment period are incorporated in the study narrative report.

### **Costing Studies**

CRS 24-50-104(4)(c) and (6)(a) require that any study involving increased costs must be included in the annual compensation report for an effective date on the ensuing July 1. In calculating costs, the following assumptions are made.

- ✓ Data is taken from EMPL as of a specific date and is assumed to be accurate as of that date. It MAY exclude the University of Colorado and Colorado State University due to the different budgeting process used for funding at these two institutions and the questionable accuracy of their data input into EMPL.
- ✓ Only permanent filled positions are included in the calculations. Information on funded vacancies is excluded due to possible inaccuracies in EMPL data. Agencies will need to include data on valid vacancies in their calculations.
- ✓ Studies are implemented on July 1 unless special authorization is obtained in accordance with statute.
- ✓ The implementation date of July 1 coincides with the presumed implementation of the annual compensation survey adjustments. In accordance with the Director’s Administrative Procedures regarding the order of multiple actions on the same effective date, system maintenance studies are implemented first. For this reason and to meet the reporting deadline, these calculations do not include any annual salary survey adjustments.
- ✓ In accordance with the Director’s Administrative Procedures, system maintenance studies are implemented on a “dollar-for-dollar” basis, which means an employee’s current salary remains unchanged when a class is moved to the new grade. An exception is when a class moves upward

and the employee's current salary falls below the minimum of the new grade. Such adjustments to base salary represent the reported increased cost.

- ✓ Costs are rounded to the nearest dollar. Any change in PERA costs needs to be included in the calculations performed by affected agencies.
- ✓ CRS 24-50-104(4)(b) states that the annual compensation report shall reflect all adjustments necessary to maintain the salary structure for the next fiscal year. As stated above, an employee's current salary remains unchanged when a class is moved to a new, higher or lower grade. If some employees' salaries are above the maximum of the new lower grade, those employees maintain their current salary for up to three years as authorized by CRS 24-50-104(1)(e). Indeterminate "cost avoidance" may result from any employees who are ineligible for base building performance pay awards after the study is implemented, those who may remain above the maximum after the three-year saved pay period, or vacancies that may be filled at the lower minimum. Any adjustment in pay grades will be included in the annual compensation report.

### **Conversion/Placement**

The conversion and placement process completes the transition from old to new classes and the placement of individual positions in the new classes. The primary purpose of conversion and placement is to preserve the retention rights of employees who may be laid off in the future. A secondary purpose of conversion is administrative ease in implementing studies. Depending on the purpose of studies and given the assumption that positions are properly allocated, it is not always necessary to review individual positions.

A system maintenance study may use either of two types of conversion: class conversion and class placement. Common characteristics of both types include dollar-for-dollar salary adjustments, the absence of examinations (because conversion or placement is not a promotion), the absence of retention rights (because conversion or placement is not a demotion), and the absence of appeal rights.

Class conversions are mass movements of all positions in an existing class to a new class. They are done primarily for retention and reinstatement purposes, without regard for the alignment of actual positions to the new concept. Class conversion is simply the transfer of existing classes into new classes. It includes the automatic, mass movement of all of the affected positions. In a class conversion, individual positions are not reviewed to determine the appropriateness of the new class.

On the other hand, class placement is the movement of a position from an existing class to a different class. It is done primarily to realign positions within the new class structure. The concept of realigning individual positions as the logical conclusion of a study is an accepted practice in the field of job evaluation. Because class placement is a realignment due to a change in the description of an occupation, and not an individual adjustment to an assignment, all positions in the class or series are aligned under the system maintenance study. Class placement is not an individual

allocation. It is part of a system maintenance study and subject to its provisions (e.g., one effective date for the entire study, dollar-for-dollar, no promotional examinations, no retention or appeal rights).

Class placement may be unnecessary given the purpose of a study. For example, if a study is focused on the salary of a class or series, conversion through placement would be unnecessary and class conversion would be more appropriate. Class placement should occur in studies where substantial changes in concept result in a different structure of classes and positions need to be realigned. Class placement typically occurs unless the study is pay grade/relationship only, or existing class concepts are unchanged. The occupational specialist determines the type of conversion to be used based on what is best for the system's integrity and affected agencies. The decision will be based on the facts unique to the particular study and explained in the narrative report.

### **Final Publication and Implementation**

Division managers and the state personnel director (or delegated designee) approve a final publication before release for implementation. Final publication includes the JEL conversion chart, narrative report, and class descriptions. A roster of class placements is published as part of the final narrative, if class placement is part of the study. A class cannot be used until it is implemented. Once all of the placements and conversions are completed, the former classes are abolished.

The official notice is distributed by broadcast email to agency human resource administrators and general employee organizations, and by placement on the website. The JEL letter that is emailed contains the website address where the reports, charts, and class descriptions are available.

It is important that internal distribution within the Department of Personnel and Administration occur in a timely manner. A copy of the study is provided to information technology staff for updating the systems and to selection staff for setting minimum qualifications, competencies, and EEO codes.

### **Records of Studies**

The following lists the minimum documentation that should be kept in system maintenance study files. Files are kept in class code order by class series. This information supplies a history of issues affecting classes and the changes made over time. This information can also be used to supplement legal records as needed. Information on classes that no longer exist is kept on CD-ROM.

- ✓ announcement of the upcoming study and solicitation of study team members;
- ✓ letters of interest from potential study team members;
- ✓ correspondence identifying issues/concerns with classes;
- ✓ notes taken on contacts with personnel administrators, employees, supervisors, managers, and employee organizations;
- ✓ working notes from study team meetings;
- ✓ articles published in newsletters and on the Internet;

- ✓ salary data provided by compensation specialists and resources used;
- ✓ survey instrument and “meet and confer” records for any direct survey conducted;
- ✓ explanation of how data was used that supports conclusions drawn from it in the proposed narrative;
- ✓ narrative reports;
- ✓ information gathered during the draft stage, if used;
- ✓ proposed and final JEL with notices and signature pages;
- ✓ class placement rosters if applicable;
- ✓ notes from “meet and confer” meetings and sign-in sheets to support information in final narrative report;
- ✓ written comments from proposed publication;
- ✓ costing information and EMPL runs used to calculate costs documented in the narrative report; and,
- ✓ final class descriptions.

## **Glossary of Terms**

**EMPL**. This is the name of the state's automated employee database system. It contains information on positions, classes, grades, and base salaries and is a source of data for system maintenance studies.

**Job Evaluation Factors**. These are the factors contained in class descriptions that are used to evaluate positions for assignment of a job to the proper class. The four factors applied to all jobs in the state personnel system are Decision Making, Complexity, Purpose of Contact, and Line/Staff Authority.

**Meet and Confer**. This is a formal process required by a statutory change in 1998. For a salary survey, "meet and confer" must occur before the survey is conducted. For system maintenance studies, "meet and confer" must occur before final study results are implemented.

**Total Compensation Advisory Council (TCAC)**. A group created by statute to advise the state personnel director on matters related to total compensation for state employees. This advisory group consists of appointed members.